

AMENDMENT UNDER 37 C.F.R. §1.116
U.S. APPLN. NO.: 09/225,486

ATTY MATTER NO.: Q52871

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (canceled).

2. (previously presented): An image processing method of carrying out image processing on a digital image signal, the image processing method comprising:
extracting a characteristic value representing a characteristic of an image sensing device from digital image signals of a plurality of images of subjects photographed by the image sensing device; and

carrying out image processing according to the characteristic value on the digital image signals;

wherein the characteristic value, when each of the digital image signals is composed of RGB color signals, is a total average of averages of the digital image signals and the image processing converts RGB color signals in a digital image signal representing an image of a gray subject to be equalized, based on the total average;

wherein the image processing is carried out by weighting the averages by using predetermined weight coefficients;

wherein each of the digital image signals is stored as an image file; and
wherein

$$R' = R + k1 (G_{ave} - R_{ave}) + k2 (G_i - B_i),$$
$$G' = G,$$

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$B' = B + k1 (Gave - Bave) + k2 (Gi - Bi)$,

where R, G and B are the RGB color signals,

Ri , Gi and Bi are averages of the digital image signals,

$Rave$, $Gave$ and $Bave$ are total averages of the averages of the digital image signals,

$k1$ and $k2$ are the predetermined weight coefficients, and

R' , G' and B' are converted R, G and B signals.

3. (original): An image processing method as claimed in Claim 2, wherein the total average is an average of weight-averages based on weight coefficients, each of which is determined by a color of each pixel in each digital image signal.

4-18. (canceled).

19. (previously presented): An image processing apparatus for carrying out image processing on a digital image signal, the image processing apparatus comprising:
characteristic value extracting means for extracting a characteristic value representing a characteristic of an image sensing device from digital image signals of a plurality of images of subjects photographed by the image sensing device; and
image processing means for carrying out image processing according to the characteristic value on the digital image signals;

wherein each of the digital image signals is stored as an image file; and

wherein

$R' = R + k1 (Gave - Rave) + k2 (Gi - Bi)$,

$G' = G$,

$B' = B + k1 (Gave - Bave) + k2 (Gi - Bi)$,

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where R, G and B are the digital image signals,

R_i, G_i and B_i are averages of the digital image signals,

R_{ave}, G_{ave} and B_{ave} are total averages of the averages of the digital image signals,

k₁ and k₂ are predetermined weight coefficients, and

R', G' and B' are the R, G and B signals that have been image processed.

20. (previously presented): An image processing method of carrying out image processing on a digital image signal comprising:

extracting a characteristic value representing a characteristic of an image sensing device from digital image signals of a plurality of images of subjects photographed by the image sensing device; and

carrying out image processing on the digital image signals, according to the characteristic value,

wherein the characteristic value relates to at least one of brightness, tone and sharpness of the image sensing device and is determined using digital image data derived from more than two different images photographed by the image sensing device;

wherein each of the digital image signals is stored as an image file; and

wherein

R' = R + k₁ (G_{ave} - R_{ave}) + k₂ (G_i - B_i),

G' = G,

B' = B + k₁ (G_{ave} - B_{ave}) + k₂ (G_i - B_i),

where R, G and B are the digital image signals,

R_i, G_i and B_i are averages of the digital image signals,

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Rave, Gave and Bave are total averages of the averages of the digital image signals,

k1 and k2 are predetermined weight coefficients, and

R', G' and B' are converted R, G and B signals.

21-22. (canceled).

23. (previously presented): The method of claim 20 wherein the characteristic value relates to tone.

24. (previously presented): The method of claim 20 wherein the characteristic value relates to sharpness.

25. (previously presented): The method of claim 20 wherein the characteristic value relates to one of tone and sharpness.

26. (canceled).

27. (previously presented): An image processing method as claimed in claim 2, wherein the extracting process and the image processing are separately performed.

28-29. (canceled).

30. (previously presented): The method of claim 2, wherein the image processing is carried out on each of the plurality of images used in obtaining the characteristic value.

31. (previously presented): The apparatus of claim 19, wherein the image processing is carried out on each of the plurality of images used in obtaining the characteristic value.

32. (previously presented): The method of claim 20, wherein the image processing is carried out on each of the plurality of images used in obtaining the characteristic value.